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ABSTRACT

Med-Cor is a program designed to improve the maturation, interest, and academic skill level of junior and senior high school students. The program is jointly sponsored by the University of Southern California School of Medicine and the Los Angeles Unified School District. Students are tutored with the expectation that their academic skills will increase to the extent that they qualify for acceptance by colleges and/or university health professional schools. Participating students are from predominantly Hispanic, Black, Asian, and other Non-Anglo (PHBAO) schools; and consequently, the program is a part of the district's master plan for integration. Med-Cor embraces three specific goals of PHBAO programs, to provide students opportunity to: (1) improve self-esteem, (2) improve levels of academic achievement, and (3) obtain access to postgraduate educational and employment opportunities. The evaluation report covering the summer program of 1981, a follow-up survey of the June 1981 graduates of Med Cor, and the Saturday program conducted during the 1981-82 school year found that the program is meeting its major goal of helping students become qualified and accepted by colleges and/or university health professional schools. (Author/PN)

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1981-1982
EVALUATION REPORT
OF
THE UNIVERSITY OF SOUTHERN CALIFORNIA
SCHOOL OF MEDICINE MED-COR PROGRAM
ONE OF THE
PREDOMINANTLY HISPANIC, BLACK, ASIAN
AND OTHER NON-ANGLO (PHBAO) PROGRAMS

TM 830421

1981-1982
EVALUATION REPORT

OF

THE UNIVERSITY OF SOUTHERN CALIFORNIA

SCHOOL OF MEDICINE MED-COR PROGRAM

One of the

Predominantly Hispanic, Black, Asian

and Other Non-Anglo (PHBAO) Programs

Conducted By

John Wright, Ed.D., Evaluator

June 30, 1982

LOS ANGELES UNIFIED SCHOOL DISTRICT

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Abstract
The University of Southern California
School of Medicine Med-Cor Program

Description

Med-Cor is a program designed to improve the maturation, interest and academic skill level of junior and senior high school students. The program is jointly sponsored by the University of Southern California School of Medicine and the Los Angeles Unified School District. Students are tutored with the expectation that their academic skills will increase to the extent that they qualified for acceptance by colleges and/or university health professional schools. Students are also exposed to various experiences designed to increase their interest in applying for acceptance by health professional schools. Participating students are from Predominantly Hispanic, Black, Asian and Other Non-Anglo (PHBAO) schools; and consequentially, the program is a part of the District's Master Plan for integration. The program contributes to the District's efforts to "reduce and ultimately remove the consequences of racial isolation." Med-Cor embraces three specific goals of the Court approved PHBAO programs to provide students opportunity to: (1) improve self-esteem, (2) improve levels of academic achievement, and (3) allow access to post graduate educational and employment opportunities. Program planners expect that as a result of experiencing the Med-Cor program, students will pursue professional health careers in greater numbers. Also, that once students are enrolled in advanced educational programs, they will successfully compete in the necessary mathematics and science courses.

The evaluation report covers the summer program of 1981, a follow-up survey of the June 1981 graduates of Med Cor, and the Saturday program conducted during the 1981-82 school year.

FINDINGS

Status of 1981 Graduates

1. Ninety-four percent of the June 1981 graduates are enrolled in college.
2. Sixty-three percent are enrolled in four year colleges and thirty-one percent in two year colleges.
3. A 1981 Med-Cor graduate's chances of enrolling in college were much better than that of all graduates of participating schools (94% compared to 58.6%).
4. A higher percentage of Med-Cor graduates enrolled in four year colleges than was the case with all graduates (63% compared to 38.5%) in the same schools.
5. Over seventy percent of the 1981 Med-Cor graduates are pursuing a health related career.

Summer Program 1981

A. Introduction to Basic Medicine

1. Students who participated in the Introduction to Basic Medicine (I.B.M.) during the summer 1981 are very supportive of the program, claiming that the experience is real and gave them an authentic feeling of what hospital life is like.
2. The experience helped most of the students make their life career decision.
3. Students increased their self-confidence with the experience.
4. Students felt their contribution was needed and useful.
5. Students did not feel that the lack of employment opportunity was a handicap.
6. Hospital staff members were very receptive to the students and were appreciative of the help they gave.
7. Staff members feel that expectations of students are raised as a result of the experience and counseling.

B. Introduction to Basic Science

1. Students who participated in the Introduction to Basic Science (I.B.S.)

during the summer of 1981 thought the experience interesting and valuable because of the opportunity to learn the doctor patient relationship, to observe first-hand the doctors work, and to communicate with patients.

2. Students found the doctors and nurses most willing to work with them and felt that the patients accepted them.
3. Nurses think the I.B.S. program an excellent one and that students benefit from the experience. In the nurses' opinion, students get first-hand experience about health careers and grow in self-confidence.

C. Introduction to Laboratory Research

1. Hospital staff members are very supportive of Med-Cor students participating in the Introduction to Laboratory Research (I.L.R.) program.
2. The students fit into the laboratory teams and perform a professional service.
3. Students develop good confidence and skills after two to three weeks.
4. Student placements in I.L.R. are carefully evaluated to insure optimum pairing of student needs and placement to meet those needs.
5. Some hospital staff feel that students should be counseled to take their time in college and get the best grades possible.

D. S.A.T. Improvement Program

1. The average scaled S.A.T. score improvement in English for the 27 students tutored was 63.89.
2. The average scaled score improvement in mathematics was 90.19.
3. Twenty-two of the 27 students improved their English score.
4. Nineteen of the 27 students improved their mathematics score.

Regular Program 1981-82

A. Attendance and Holding Power

1. The primary reason for students leaving Med-Cor continues to be competing interests and responsibilities on Saturdays.

2. Attendance was greater during 1981-82 than in the two previous years and also more stable.

B. Test Results

1. Junior high school students recorded a mean gain of 56 percent in mathematics fundamentals, a 208 percent gain in Algebra I and 262 percent gain in calculus.
2. Senior high school students did even better in mathematics with a mean gain of 144 percent in fundamentals of algebra, 115 percent in Algebra II, 63 percent in algebra/trigonometry, and 283 in geometry.
3. Senior high school students exhibited a mean gain of 70 percent in biology, 78 percent in chemistry and 88 percent in physics.
4. Neither junior high or senior high school students did well in English. The junior highs registered only a 6 percent mean gain in Grade Placement for Reading while the senior highs showed a 9 percent loss. Junior highs made a 10 percent gain in English skills while senior highs made a 35 percent gain.

C. Student Opinion

1. Students of all levels thought the tutoring received this year was both helpful and interesting.
2. Students were complimentary to instructors for their patience and understanding.
3. About 16 percent of the junior high school students wanted more writing and speaking experience in the English class. About 15 percent of the senior high school students had negative comments about their English and mathematics classes.
4. About 21 percent of the senior high school students interviewed said they had received some counseling help. All were pleased with the help received.
5. When asked to rate their total experience in Med-Cor to this point in time, 58 percent of the junior high school students rated the experience "excellent," 27 percent "good" and 5 percent "average." Senior highs were only slightly less supportive, 32 percent rating it "excellent," 58 percent "good" and 10 percent "average."

6. Senior high school students when asked for suggestions to improve Med-Cor suggested "more medical and college students to talk to them," "more field experience and "even more laboratory experience in science."
7. Graduating seniors as a group said that as a result of their Med-Cor experience they felt more confident that they will be successful in pursuing a college education or career.

D. Counseling Services

1. In the opinion of counselors, 1981-82 was a year of improved referral practices and improved communication between Med-Cor staff and counselors.
2. In the opinion of counselors, the greatest hindrance to better counseling service is the heavy workload because of a shortage of counseling staff and time.

E. Family Core Unit

1. Attendance and participation of parents at meetings was greater than in any previous years.
2. Parents remain supportive of Med-Cor and appreciative of what Med-Cor is doing for their sons and daughters.

CONCLUSIONS

Based on the findings of this evaluation, the conclusions are:

1. The Med-Cor program is meeting its major goal of helping students become qualified and accepted by colleges and universities.
2. The Med-Cor program is successful in helping participating students become interested and motivated to enroll in advance study and preparation for health careers.
3. The Saturday program during the school year is doing much to assist students in improving their skills in mathematics and science.
4. The tutorial program to help students improve their skills in English does not seem to be accomplishing its objective.

5. The summer program is particularly successful in raising the career aspirations of students, motivating their interest in pursuing a health related career and in improving their self-image and confidence.
6. The high degree of success of participants in qualifying for and pursuing advanced educational experience is evidence that the program is doing much to reduce and ultimately remove the consequences of racial isolation.
7. Parents are very supportive of the Med-Cor program, want to be informed, and are ready to assist in ways to keep the program operating and successful.

RECOMMENDATIONS

1. As instruction in English appears to remain a major weakness in the Saturday program, staff should re-study the objectives of the course and see that content matches objectives. A portion of the students seem to expect something different than the course is now designed to provide.
2. The currently used "Grade Placement For Reading" test should be analyzed to see if it is testing what is being taught. If the two do not match, either the content of course should be revised or an alternate test selected.
3. The summer program should be available to a larger portion of the Med-Cor students. The experience remains a very essential element of Med-Cor for motivation of students and as an exploratory experience to assist students in making successful career choices. Limited paid work experience opportunities primarily restrict greater participation. The staff's efforts have been less successful than desired. In the hope that sponsoring or other agencies that read this evaluation wish to and can be helpful, it is again recommended that ways be explored to expand the participation of students in the summer program.

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DESCRIPTION OF THE PROGRAM

Med-Cor is a program designed to improve the maturation, interest and academic skill level of junior and senior high school students. The program is jointly sponsored by the University of Southern California School of Medicine and the Los Angeles Unified School District. Students are tutored with the expectation that their academic skills will be increased to the extent that they will become qualified for acceptance by colleges and/or university health professional schools. Students are also exposed to various experiences designed to increase their interest in applying for acceptance by health professional schools. Participating students are from Predominantly Hispanic, Black, Asian and Other Non-Anglo (PHBAO) schools and consequentially the program is a part of the District's Master Plan for integration and contributes to the District's efforts to "reduce and ultimately remove the consequences of racial isolation." Med-Cor embraces three specific goals of the Court approved PHBAO programs to provide students opportunity to: (1) improve self-esteem, (2) improve levels of academic achievement, and (3) allow access to post graduate educational and employment opportunities. It is expected that as a result of experiencing the Med-Cor program, students not only will pursue professional health careers in greater numbers, but that once enrolled in advanced educational programs, they will be able to successfully compete in the necessary mathematics and science courses.

Background and History

Med-Cor has been in operation a decade. It was started in 1970 with only four local high schools participating: Wilson, Roosevelt, Jefferson and Washington. In 1981-82 in addition to the original four participating high schools over seven additional high schools participated as well as contributing junior high schools. Refinements and improvements in the program have been made each year but the goals and component activities designed to help students attain the goals have remained basically the same. In the 1980-81 school year ninth grade students from contributing junior high schools were invited to participate. Total enrollment has grown to 356. Med-Cor currently serves fourteen fully participating senior high schools, and twenty contributing junior high schools in the Los Angeles Unified School District with participating numbers of students as follows:

TABLE I

JUNIOR HIGH SCHOOL ENROLLMENTS
N = 145

School	Grade Level	
	8th	9th
Adams	2	6
Audubon	7	3
Belvedere	2	7
Carver	2	4
Clay	1	8
Edison	1	2
El Sereno	9	9
Foshay	2	7
Griffith	3	2
Harte	5	0
Hollenbeck	0	2
Lincoln	4	8
Mann	4	1
Markham	4	2
Mount Vernon	1	2
Muir	0	2
Nightingale	5	4
Stevenson	1	11
Virgil	2	1
Gompers	7	2
Others	0	2
Total	60	85

TABLE II

SENIOR HIGH SCHOOL ENROLLMENTS
N = 211

School	Grade Level		
	10th	11th	12th
Belmont	10	2	5
Crenshaw	6	5	7
Dorsey	7	10	6
Fremont	3	1	0
Garfield	4	9	2
Jefferson	9	0	1
Jordan	1	1	0
Lincoln	11	0	2
Locke	5	4	3
Los Angeles	10	9	0
Manual Arts	11	4	8
Roosevelt	8	5	2
Washington	7	1	8
Wilson	8	6	8
Other	0	2	0
Total	100	59	52

PROGRAM GOALS

Increased Maturation, Interest and Skill Development

Through tutoring, counseling and with the help of parent support it is the goal of the program to help participating students exhibit a more mature attitude toward and interest in school and the pursuit of a career. It is also expected that improvement in academic skills will result and that this will contribute toward improved self-confidence and interest.

Preparation for College

As academic skills of participating students improve, it is expected that this improvement coupled with some specific help in preparing for SAT tests, will result in students experiencing greater success in passing the SAT test and in being accepted in the college of their choice. All components of the program, tutoring, counseling, parent support and the summer work/study program are designed to have some impact in meeting the major goal of the program: To help students become qualified so that they will be accepted by professional, college and university level schools, and be able to successfully compete with other students.

Enrollment in Health Careers

Through exposure to good health career models and health career content and by actually experiencing health career activities, it is expected that participating students will become interested and motivated to enroll in advanced study and preparation for health careers.

COMPONENTS

There are four components to the Med-Cor Program. Three of these components function on Saturday, during the school year, and a fourth component is provided during nine weeks of the summer.

Saturday Tutorial Program

During the school year, the Saturday Tutorial Program is in operation between 9 a.m. and 1 p.m. on the main campus of the University of Southern California. Students are transported from their home school to USC by school district buses. The students are provided with academic enrichment in the area of math (algebra to math analysis), science (biology, chemistry and physics), English and study skills. Students are exposed to formal lectures which stress concepts. This is followed with individual tutoring to help students apply the concepts and to successfully complete homework assigned in their regular classes at sending schools. For the formal lecture phase, students are grouped according to their performance on a pre-test. Their progress in attainment of cognitive learning and skill development is then measured by use of the same test on a pre-test to post-test basis. Many students, prior to experiencing the program, have developed some rote memorization of processes but lack the conceptual skills to compete successfully at the college level. Each Saturday students receive 50 minutes of instruction in each of three areas: science, math and English. In addition, tutoring is provided and when necessary the tutoring is done in Spanish. Tutors are paid a nominal fee and are recruited from the ranks of USC graduate students or graduated Med-Cor students. The final hour is devoted to presenting organized symposia where students are exposed to various health professionals as role models and where major issues facing health care delivery are discussed. Symposia are presented by medical students, practicing health professionals (doctors, dentists, pharmacists, nurses, etc.) and medical school faculty. The Saturday tutorial program places major emphasis on the health career field, attempts to motivate the students to pursue a health career, and to develop the academic skills necessary to be successful.

Summer Work/Study Program

Students are provided nine weeks of work/study at the Los Angeles County

USC Medical Center. The experience is designed to introduce each student to the health system and by exposure to the various career representatives to further motivate their interest in pursuing a health career. Each of the three years of the program provides the student a different experience.

-Tenth Grade Experience (Introduction to Basic Medicine - IBM)
The IBM component exposes the student to experience with patients on the wards throughout the hospital. By actually working under guidance directly with patients students have an opportunity to appreciate the flavor of day to day health care work. Experience with the program has elicited considerable support from the nursing and other hospital staff so that the experience for students is real and meaningful.

-Eleventh Grade Experience (Introduction to Basic Science - IBS)
The IBS component provides three days of academic work and two days of ward experiences. The academic work is designed to prepare students for laboratory work and to prepare them for the SAT examination. The SAT examination must be passed as a condition of acceptance in most colleges. Students although reduced to two days of ward experience are considered as advanced Med-Cor students and therefore are assigned ward activities that require more responsibility and knowledge.

-Twelfth Grade Experience (Introduction to Laboratory - ILR)
ILR is for those students who in June graduated from high school. Most are placed in research laboratories. Those who wish to be nurses are returned to the wards for more practical experience and those who wish to be technicians are provided experiences in physical, occupational, recreational or respiratorial therapy. ILR is designed to bridge the gap between high school and college.

Family Core Unit

This component is designed to bring the family into the programs as a support group. Parents of Med-Cor students are organized into a group that meets once a month. They are expected to provide encouragement and support to their children in the program. As they are familiarized with the program, they can be more understanding about what the Med-Cor student is going through.

Counseling Services

Students are provided counseling in a number of areas: career, academic, and personal. Help is also given about job application techniques and how to properly complete application and other forms. Staff of Med-Cor meets biweekly with students at each sending school site and coordinates all counseling activities with the counselors at each school. All meetings with students are held at out of school times; after school or during the noon hours. Meetings with students on the sending school site are designed to reinforce the liaision between Med-Cor and sending schools.

EVALUATION QUESTIONS

Evaluation questions evolved from three sources: (1) efforts of Med-Cor to meet its stated goals, (2) efforts of Med-Cor to improve weaknesses in the program identified in the previous year's evaluation and (3) efforts of Med-Cor to meet the goals of Court approved PHBAO programs. The specific questions posed for inquiry therefore should give answers that will serve to monitor the overall success of the program in meeting its goals and eliminating its weaknesses and assess the extent to which the program attained the PHBAO program goals. Answers to the following questions were sought:

1. How successful was the Med-Cor program in 1981-82?
   - 1.1 Was attrition in enrollment reduced when compared with previous years?
   - 1.2 Was attendance improved?
     - 1.2.1 When compared with previous years?
     - 1.2.2 When compared with home school attendance?
   - 1.3 What portion of the June 1981 graduates pursued college degrees and health related careers? (PHBAO Goal)
2. How effective were the major components of the program?
   - 2.1 Tutorial program?
     - 2.1.1 Were steps taken to make mathematics and English tutoring more effective?
       - 2.1.1.1 If taken, were the steps helpful?
     - 2.1.2 Were steps taken to make the Saturday program more interesting to students and more effective in meeting their needs?
       - 2.1.2.1 Did academic achievement improve? (PHBAO Goal)
       - 2.1.2.2 Did students think the program more interesting and helpful?
   - 2.2 Summer program?
     - 2.2.1 What evidence exists of the success of the summer program?
     - 2.2.2 Does self-esteem of participants improve? (PHBAO Goal)
3. How successful were the support programs?
   - 3.1 Counseling?
     - 3.1.1 Was counseling helpful in the opinion of students? Counselors?
     - 3.1.2 Were steps taken to better inform counselors about all aspects of the program and about student problems?

3.1.2.1. Were the steps effective?

3.2 Family Core?

3.2.2 Were steps taken to improve involvement of and communication with parents?

3.2.2.1. If so, were they helpful?

EVALUATION PLAN AND DESIGN

Status of 1981 Graduates (Success of the Program)

The extent to which graduates of the Med-Cor program pursue college degrees and health related careers is a major concern of both Med-Cor and PHBAO. It is the single most important indicator of success of the Med-Cor program and if greater numbers of students than normal are able to take advantage of post graduate educational and employment opportunities then the consequences of racial isolation have been substantially overcome. In the fall of 1981 an attempt was made to contact all of the June 1981 graduates to ascertain their current jobs and/or educational status. Both telephone and U.S. mail communication were used. Information about the graduate's college in which enrolled, their major and career goal was sought. These results were to be compared with last years findings as well as with the "normal" percentage of graduates from participating schools who apply and are accepted by a college or university. The source of data for a measure of "normal" was to be the Follow-Up Study of the 1978 High School Graduates in the Los Angeles Unified School District, Report No. 376 conducted by the Research and Evaluation Branch of the District. This study is done at five year intervals.

Data concerning the percentage of Med-Cor graduates enrolled in a program leading to a health related career can be compared with similiar data from last year. In addition Report No. 376 mentioned above contained some data about graduates on a District-wide basis that would be used for comparative purposes.

1981 Summer Program

Evaluation of the summer program was concerned with the three main practical experiences offered Med-Cor participants and the assistance given the graduated seniors to pass the S.A.T. test for entrance into college. Supervisory evaluations were available concerning the participation of twelfth grade students in the Introduction Laboratory Research (I.L.R.). Analysis of these records was planned as one indication of the success or failure of the program. For the tenth grade program Introduction To Basic Medicine (I.B.M.) a sampling of the supervising nurses were to be interviewed and a sampling of the tenth grade students were to be interviewed. For the eleventh grade program, Introduction To Basic Science

(I.B.S.) it was planned to interview a sampling of the technicians and the participating eleventh grade students.

During the summer a portion of the graduating seniors that had not passed the S.A.T. test was tutored after the initial try. Analysis of the performance of these students taking the S.A.T. a second time will tell us whether or not the tutoring was helpful.

Enrollment and Attendance (Success of the Program)

To be successful, any program designed to help students overcome academic deficiencies must maintain continuity in enrollment and good attendance. As a result of recommendations made to staff based on the 1980-81 evaluations, efforts were made in the 1981-82 school year to reduce attrition and improve attendance. Analysis of records of enrollment and attendance will be made to see if improvement took place. A study done during the 1980-81 school year by the Federally Funded Section of the Research and Evaluation Branch of the home school attendance pattern will be used, if results are available, to compare with Med-Cor attendance. Such a comparison would serve to show whether or not Med-Cor attendance on Saturdays is better than the home school patterns of attendance. In addition wherever possible, students who drop-out of the program are interviewed concerning the reasons for leaving the program. These data will be analyzed for the main causes for students leaving the program.

Effectiveness of the Tutorial Program

The success of the entire Med-Cor program in achieving it's goals is dependent on the effectiveness of the tutorial program held on Saturdays. Two major aspects of the tutorial program will be looked at carefully, (1) the academic achievement improvement that may have come from the tutorial assistance and (2) the extent to which students thought the program was interesting and helpful.

The changes that may have occurred in academic achievement of senior high school students were measured by the use of a pre-post mode of testing in each of the academic areas, biology, chemistry, physics, Algebra I and II and English. Junior high school students were tested in English and basic mathematics. The initial testing was done in October and after the students were exposed to seven months of tutorial help, they were again tested using the same tests. To each

subject an average raw score will be computed for the pre-test and for the post-test. The differences between the pre-test and post-test scores will be obtained for each subject and considered to be a measure of change in the average level of academic skills of the Med-Cor participants.

It should be recognized that these pre-post measurements of change in academic achievement will tell us if change is taking place, but not the significance of such change. Participants of Med-Cor are recruited solely on the basis of interest and regardless of their current educational goals. Some students will be in college preparatory programs and some will not. The tutorial program was designed to develop interest in science and mathematics as well as improve the skills of students in these areas. As a consequence all tenth grade students are exposed to help in biology whether or not they are enrolled in a biology class in their home school. This is true in other grades and subjects as well. Students are grouped, however, on the basis of individual needs and assignment to a particular group is flexible and based on progress made in classes in the home school and in the Saturday sessions. Although not impossible it is not practical within the resources of this evaluation to control and analyze all the variables affecting the change in academic skill levels of participants. It is necessary to be content with measuring whether or not change occurred and hope that Med-Cor was an important influence in bringing about change.

The tests used with the exception of portions of the English test were basically objective referenced tests constructed by Med-Cor staff and designed to test those knowledges and skills basic to each of the subject areas under consideration. The tests were reviewed by a panel of consultant teachers for comprehensiveness and appropriateness when originally developed in 1978. The tests were refined as a result of analysis and reviewed by the panel based on their use in the 1979-1980 school year. The number of items in each test were as follows:

Mathematics		Science	
Basic Mathematics	68	Introductory Biology	35
Algebra I	51	Biology	50
Algebra II	40	Chemistry	50
Geometry	61	Physics	50
Trigonometry	48		
Calculus	29		

In English a standardized test was used to measure vocabulary and paragraph comprehension. The Nelson Reading Test designed for grades 3 to 9 was selected. It contains a total of 75 items.

A finding of the 1980-81 evaluation was that staff needed to take steps to improve instruction in English and mathematics. Not only was the performance of students in these two areas less satisfactory than in science, but students also were critical of the help given in these areas. Staff will be interviewed to identify any actions taken to improve instruction in mathematics and English. Analysis of the test scores and comparisons with last year's progress will tell us if the instruction improved. In addition, however, student opinions will be solicited by questionnaire and personal interview to ascertain their feelings about the elimination of weaknesses in these two areas of instruction. Student opinion will also be solicited concerning whether or not the total tutorial program was more interesting and helpful than last year.

Counseling Program

The counseling program will be studied for its effectiveness as a support program. A finding of the 1980-81 evaluation was that the counselors felt a need to be better informed about the program and problems of students. Staff and counselors will be interviewed concerning steps taken this year to involve counselors to a greater extent in the communication about the program, the students and problems. Toward the end of the year counseling staff will be surveyed concerning the number of students served and the type of help given and whether or not the counseling environment was improved. Students will be surveyed concerning this and other phases of the program.

Family Core Unit

The family core unit will be evaluated for its effectiveness as a support program. Staff will be interviewed to identify efforts made this year to improve communication with out participation of parents.

Parents will be surveyed concerning their perceptions of the Med-Cor program.

Plans of 1982 Students (Success of the Program)

In May, the seniors scheduled to graduate in June 1982 will be surveyed concerning their plans for the fall of 1982. Answers to questions about colleges they plan to attend, majors they plan to study and careers they plan to prepare for will be solicited.

FINDINGS AND DISCUSSION

This report contains a description of all the activities that occurred during the period July 1, 1981 through June 30, 1982 related to the evaluation of the Med-Cor program. A preliminary report containing aspects of the evaluation relating to the status of 1981 graduates of Med-Cor and the effectiveness of the summer 1981 program was published February 1, 1982. The contents of that Mid-Year Report, plus the evaluation of the 1981-82 tutorial program and its support activities make-up this final report covering the whole year. This report is organized in two parts, (1) a follow-up study of the 1981 graduates of Med-Cor and (2) the 1981-82 evaluation.

PART I

Follow-up Study of 1981 Graduates

Med-Cor attempts as its primary goal to motivate and qualify students from inner city schools to enter colleges and universities and pursue studies for an advanced degree preferably in health related career area. Likewise a primary goal of the court approved PHBAO component of the Los Angeles Unified School District's Master Plan for Integration is to alleviate the harms of racial isolation for those students who attend schools which will remain racially isolated. Both these goals will have been achieved if a higher percentage of Med-Cor graduates than their home school graduates pursue a college education. If this higher percentage of Med-Cor graduates pursue a health related career, the secondary aspect of the Med-Cor goal will have been met. Efforts to contact the June 1981 graduates were successful in 54 (87%) of the 62 possible cases. Details of the 54 responses may be found in Table III. Ninety-four percent of the respondents were enrolled in an institution of higher learning. This compares well with the 1980 class where ninety-seven percent were similarly enrolled. Sixty-three percent of the 1981 graduates were enrolled in a four year college and thirty-one percent were enrolled in a two year college. When compared with the status of all graduates of participating high schools one year after graduation these findings take on added significance. The overall average of college enrollment of all students who graduated in June 1978 was only 58.69 percent (Table VI). Data concerning the 1978 graduates are the latest available concerning graduates of the partici-

pating high schools. These data appear to be reliable for such a comparison however, because similar studies in 1973 and 1968 show only a slight deviation from the 1978 percentage. Med-Cor students are accepted into the program primarily on the basis of interest so it would appear unreasonable to expect the percentage of Med-Cor graduates that enroll in college to differ appreciably from the percentage of all graduates that enroll in college--unless the Med-Cor experience made a difference.

Over seventy percent of the 1981 Med-Cor graduates enrolled in college are pursuing a health related career (Table VIII). The latest district wide data concerning graduates (June 1978) indicate only about twenty-seven percent of college enrolled graduates pursue a health related career. Here again, because the Med-Cor participants come from inner city, racially isolated schools one would not expect them to exceed the city wide average unless the Med-Cor experience made a difference by overcoming the effects of racial isolation and alleviating the harms of the environment.

Data concerning the college majors of the Med-Cor graduates are displayed in Table VII. Forty-one percent of the students are majoring in biological science.

The graduates of Med-Cor in June 1981 are enrolled in twenty-seven different colleges and universities (Table V). Most are enrolled in four year California institutions but about nine percent are enrolled out of State (Table IV).

TABLE III

EDUCATIONAL AND EMPLOYED STATUS OF MED-COR GRADUATES

STATUS	NUMBER	PERCENT
Full-time student in a four-year college	34	63
Full-time student in a two-year college	17	31
Full-time student in a vocational/technical school		
Part-time student only		
Part-time student, part-time working	1	2
Part-time student, homemaker		
Part-or-full-time working only		
Working under apprenticeship program		
Full-time Military Service	2	4
Total	54	100

TABLE IV

SCHOOL AND COLLEGE ENROLLMENT OF 1981 MED-COR GRADUATES

SCHOOL AND COLLEGES	NUMBER	PERCENT
Four-year Colleges		
Calif. State Univ. and Colleges	10	18
University of Calif. (All Campus)	15	28
California Independent Colleges	5	7
Out-of-State Colleges	4	7
Total Four-Year Colleges	34	63*
Community Colleges		
Los Angeles District Colleges	12	22
Other Community Colleges, Calif.	4	7
Out-of-State Community Colleges	1	2
Total Community Colleges	17	31*
Vocational Schools	0	0

*Total does not equal 100% of graduates. Six percent reported to be not currently attending school.

TABLE V

MED-COR GRADUATES: ONE YEAR AFTER GRADUATION
ENROLLMENT AS FULL TIME STUDENTS IN SCHOOLS AND COLLEGES

N = 51

School/College	Number
1. University of California, Los Angeles	6
2. California State University, Los Angeles	6
3. East Los Angeles College (J.C.)	4
4. Los Angeles City College (J.C)	4
5. University of California, Santa Barbara	3
6. University of Southern California	3
7. University of California, Berkeley	2
8. University of California, Irvine	2
9. West Los Angeles College (J.C.)	2
10. California Institute of Technology	1
11. California State University, Bakersfield	1
12. California State University, Dominquez Hills	1
13. California State University, Pomoma	1
14. Chapman College	1
15. El Camino College (J.C.)	1
16. Occidental College	1
17. Palos Verdes College (J.C)	1
18. Pierce College (J.C)	1
19. Pomona, College (J.C)	1
20. Princeton, University	1
21. Settle Junior College	1
22. Smith College	1
23. Southwest Los Angeles College (J.C.)	1
24. Talladega College	1
25. University of California, Davis	1
26. University of California, Northridge	1
27. Yale University	1

TABLE VI

COMPARISON OF THE EDUCATIONAL STATUS OF ALL GRADUATES OF PARTICIPATING HIGH SCHOOLS AND THE MED-COR GRADUATES FROM THE SAME SCHOOLS ONE YEAR AFTER GRADUATION

Educational Status	All Graduates	Med-Cor Graduates
In Four Year Colleges	39	63
In Community Colleges	20	31
Employed	41	2
Other	0	4

TABLE VII

COLLEGE MAJORS OF 1981 MED-COR GRADUATES
N = 51

Major	Percent
Biology	51
Mathematics	8
Chemistry	6
Engineering	4
English	4
Liberal Arts, Psychology	4
Architecture	2
Education	2
Science	2
Undeclared	15

TABLE VIII

INTENDED CAREERS OF 1981 MED-COR GRADUATES

N = 51

Career	Percent
Medical Doctor	51
Nurse	15
Engineer	6
Psychologist	4
Telecommunication	4
Architect	2
Computer Programmer	2
Educator	2
Lawyer	2
Pharmacist	2
Physical Therapist	2
Public Relations	2
Scientist	2
Undecided	4

TABLE IX

TYPICAL ACTIVITIES RECORDED IN JOURNALS
OF
STUDENTS PARTICIPATING IN INTRODUCTION TO BASIC MEDICINE

Activities
• Supplies patients with water
• Talked to patients
• Observed incoming emergency patients
• Answered telephones
• Filled out charts
• Filled out transfer papers
• Took vital signs - blood pressure, pulse, heart beat and temperature
• Ran errands
• Took patients to xray
• Helped doctors work on patients
• Did terminal cleaning
• Observed surgery
• Filed papers
• Fed patients
• Got blood from blood bank
• Make urine tests
• Translate patient speech to doctors
• Attend lectures
• Help dress patients
• Took blood samples to laboratory
• Toured sections of hospital
• Changed bed sheets
• Observed spinal taps and other medical exercises
• Research various diseases

PART II

Summer Work/Study Program 1981

The summer program is conducted at the University of Southern California Medical Center and is designed to take Med-Cor participants in successive stages of increasing responsibility through practical experiences of hospital life. It is not possible for all Med-Cor participants to receive the summer experience because of limitations in placement under provisions of the Summer Youth Employment Program. An ongoing problem of Med-Cor staff has been to explore new sources of funds to provide a paid work experience for all of the interested participants. To date no additional source of funds has been identified. During the summer of 1981 Med-Cor students participated in the three summer programs.

Introduction to Basic Medicine (IBM) For this intital experience in the sequence of summer Med-Cor programs, students were required to keep a daily log of their activities and encouraged to react to those experiences by recording their feelings and thoughts. Supervisors comments in the journals indicated the difficulty of getting students to interject their thoughts about the experience they had. Nevertheless, the daily logs were a good reflection of the actual activities experienced by the participants. Table X contains a list of the most typical activities recorded in the journals. Students worked in pairs and their journals show considerable interest in their work, some joy and some boredom due to the repetitive nature of the assigned tasks. Following is a typical entry.

> "Today was my most interesting day. I had fun. I ran errands, I took patients down to xray and brought them back up to the clinic. I filled out patients forms, I answered phones, beeped the doctors and gave very important messages."

Ten percent of the I.B.M. participants were interviewed in the fall. They were asked to give their impressions of the experiences they had and to comment about the strengths and weaknesses of the program.

Students interviewed were very supportive of the I.B.M. experience. They

felt that the experience was real and gave them an authentic feeling of what work in a hospital is really like. The experience helped most in their decision about what they wanted as a career. The work was interesting and because doctors and nurses were supportive they felt their contribution was needed and useful. Typical of their comments were the following:

"The experience was something you won't find in a book."
"I met some doctors who had been through Med-Cor themselves."
"It helped me decide what I wanted as a career."
"It was interesting - helped me see the whole Medical field."
"The doctors encouraged us to ask questions."

It was difficult to have the students interviewed identify any weaknesses in the summer I.B.M. program. About the only negative reaction was that sometimes repetitive tasks became boring. Some of their comments in this respect are:

"Taking vital signs sometimes got boring."
"The work was at times dirty and boring but that's how the work is."

When student interviewees were questioned about their confidence to take on I.B.M. work in a big hospital they all indicated that at first it was a bit frightening but as time went on they gained confidence. They indicated the instruction received was good, that the nurses worked closely with them, and with experience came less supervision and independence. From their comments, there is no doubt their self image grew with their increased experience (knowledge). Following are some of their comments:

"It was a little frightening in the beginning."

"The nurse worked closely with us."

"The instruction was good-first with the whole group and later individual."

"Nurses did a good job explaining what was happening to patients."

Fourth area of questioning concerned any problem experienced by student's because of having to give up opportunities for employment in order to participate in I.B.M. Not one student interviewed thought this was a problem. They all received some compensation from the Summer Youth Employment Program. Students thought they could work in the late afternoon or Saturdays if they wished, and some did. To all however the experience of I.B.M. seemed more important than the opportunity to earn money. Some of their comments were:

"Med-Cor takes time but you can get a job if you want."

"The experience will pay off in the long run."

"My parents believe in what I am doing and support me."

Two nurses and a Med-Cor supervisor were interviewed to get their perceptions of the program and the students served. The supervisor was a prior participant in Med-Cor program. She feels the I.B.M. program is an excelient one and that the students are benefited. In her opinion, the hospital staff is very receptive to the students and appreciate the help the students give. Some summers are better than others, however, the hospital has had good experiences with Med-Cor. She states that the journals kept by students reflect some frustration they feel with they system. This activity allows the students to get the frustrations out of their system so they can be calm and positive with patients. Also, expectations of students are raised as a result of the hospital experience and counseling.

The two nurses believe the program to be a good one because the students get first hand experience. The interested and willing students are good workers so both the hospital and students profit. Students are shy in the

beginning but soon gain confidence in themselves and the job they can do. Students are assigned two to a ward and seem to respond well at all tasks.

Introduction to Basic Science. As with the I.B.M. program, ten percent of the I.B.S. participants in the summer 1981 program were interviewed. Although a different experience than the I.B.M. program, I.B.S. participants opinions and comments were quite similar. They thought the program was interesting and that they learned a lot. To learn the doctor-patient relationship, to observe doctors at work first hand, and to work and communicate with patients seemed very worthwhile experiences to students. They found the doctors and nurses most willing to work with them, and felt the patients accepted them. Some of their comments were:

"To learn the doctor/patient relationship will help me later on in school and in my career."
"I assisted doctors and could question them."
"You feel you are really in medicine."
"Patients accepted me as well as the hospital staff."

Two nurses interviewed about their experience with the I.B.S. program. They felt that the experience is a wonderful opportunity for students to explore and make up their minds about a health related career. Students, in the opinion of nurses, are accepted as a part of the medical team where they can observe and be a real help. They found students to be willing, conscientious and responsible. Students' attendance was good. They were punctual even at lunch breaks. The ability of some Spanish speaking students to translate for patients and doctors was a valuable asset to the doctors. It was a satisfying experience for the nurses to watch youngsters grow in self-confidence during the summer.

Introduction to Laboratory Research. Seniors who had participated in the I.L.R. program during the summer of 1981 were not available for interview. A doctor, a technician and a supervisor who participated in the program were available as sources of information about the success of the program. The doctor and technician were interviewed and the supervisor provided copies of her written evaluation reports.

The doctor was supportive of the program but critical of the counseling

given students. He said the student's fit right in with other staff, were enthusiastic, and after one summer were doing really professional work. Nevertheless in talking to the students, he believes they should be counseled to take more time in college so they can get good grades. He feels the competition in pre-med school is so great that these youngsters need to take more time. Also, he believes that students receive inadequate advice about other phases of allied medical fields such as physical therapy, dentistry, various technician position, girls physical therapy and dental hygienist. They need good job orientation and help in developing reasonable expectations so that they get adequate preparation in high school. He suggests taking one science a year and getting good grades.

Students develop good confidence and skills after two or three weeks and fit in to the staff as one of them. The doctor feels it is real enjoyable to watch them come each summer, and then grow and change into responsible laboratory assistants.

The supervising technician interviewed works with students in the phycia-tric hospital. Only selected seniors can work in these wards. The students receive orientation about how to work with patients. The students assist the 25 adults servicing the ward. In the opinion of the supervisor, the students are a great help to patients in seeing that they remain reality oriented. Students talk to patients and listen to patients. Some students are shy and frightened about this experience at first but with time they grow in confidence. They help students set goals and know what to do when they leave the hospital. Students after a summer of this experience feel they have been really useful in helping others and as a result develop a greater sense of self worth.

Records of one supervisor of the 1981 I.L.R. component were analysed. Her evaluation of each student placement was carefully and thoroughly done and gives a good indication of the success or failure of the component. Of twenty-five separate places for placement, all seemed to provide a good environment for student learning. Nevertheless, at least one had too many students to keep all of them meaningfully busy, and several spots could handle an additional student. This careful evaluation of placements does much to make the component successful and it seems clear from her evaluations that good placements are dependent on careful pairing of individual student needs with placement spots that can meet those needs.

S.A.T. Improvement Program. Twenty-seven students who had previously taken the S.A.T. test to qualify for college acceptance and who wished to improve their scores before applying to college were tutored during the summer. Tutoring was provided in the two main areas of the test, mathematics and written language facility. After tutoring, these students prior to the opening of school in September again took the test. A pre and post performance scores on the S.A.T. test were obtained for the 27 participants. All the scores were averaged and gains computed for each of the two sections. The results of this analysis are displayed in Table X. Participants in the tutoring improved their scores in Mathematics by an average of 90.19 points. They improved their scores in English by an average of 63.89 points.

TABLE X

S. A. T. SCORE* CHANGE
N = 27

Test	August Pre Test Score*	August Post Test Score*	Difference
Math	394.81	485	+ 90.19
Verbal	301.11	365	+ 63.89

*Scaled score

Saturday Tutorial Program

Staff Efforts To Improve The Program. As a result of recommendations that evolved from last year's evaluation, staff took a number of steps to improve the 1981-82 program and its operation. The instruction in English and in mathematics during 1980-81 appeared to students as needing strengthening. To meet this problem, a series of staff meetings were scheduled with instructors and instructional specialists in attendance. Open discussion by instructors of their problems with instructional specialists on hand to give help, was encouraged as a way to improve the instruction. In the area of science, the program was strengthened by staff arrangement for a high level laboratory experience to be provided in collaboration with the University of Southern California. To increase holding power for students selected and to improve attendance, three steps were taken. All students were asked to sign a contract to strengthen their commitment to good attendance and hard work. An attendance policy was established whereby any student who is absent for three consecutive Saturdays without staff approval is subject to be dropped from the program. Also, any student who is absent five Saturdays per semester, consecutive or not, without approval is subject to be dropped. This attendance policy is supported by a vigorous follow-up contact with each student's home to insure that absences do not continue and do not multiply.

Holding Power. Despite expansion of the Med-Cor Program to include junior high school students, the percentage of students dropping out of the program has become smaller this year. About sixteen percent of those enrolled in October 1981 left the program during the year. This compares favorably with the twenty-two percent that have left the program during each of the last two years.

Attempts were made to contact each of the fifty-five students who dropped out during the 1981-82 school year to ascertain the reasons for their leaving the program. Twenty-three of the fifty-five left because they had other responsibilities or interests on Saturdays. This represented almost forty-two percent of the total. Five dropped out because they missed classes and/or did not have the drive to continue. Fewer students left because they did not think the program offered enough challenge.

Data concerning the responses of students about why they left the program are contained in Table XI.

An intersting outcome of these contacts with students who left the program is that eighteen of the total still plan to pursue a medical career and thirty-seven of the total still plan to attend a four-year college. The extent to which Med-Cor had little negative influence even on those who leave the program.

TABLE XI

REASONS FOR STUDENTS LEAVING MED-COR

	REASON	NUMBER
1.	Other responsibilities or interests on Saturdays	23
2.	Med-Cor couldn't meet individual needs	5
3.	Missed classes/lack of drive	5
4.	Not enough challenge in classes	4
5.	Changed school	2
6.	Transportation problems	2
7.	Change of career goal	1
8.	Illness in family	1
9.	Got married	1
10.	Unable to ascertain reason	11
	Total	55

Attendance. During the 1980-81 school year, the attendance of students at the Saturday program steadily declined during the year and in the spring semester, averaged only slightly over thirty percent. This was far less than the Med-Cor staff thought desirable and as a consequence several steps were taken in 1981-82 to improve the situation. Student contracts were initiated wherein greater student commitment was solicited. In addition, student attendance records were improved to help staff do a better job of follow-up contacts with each student's home. As a result of these efforts, attendance during 1981-82 decidedly improved.

Attendance percentages averaged for each month are graphed in Table XII. The number present divided by the actual enrollment was computed for each Saturday and then, averaged for the month. Attendance peaked in October at seventy-nine percent and although a decline was exhibited from this point onward during the school year, the pattern was far more stable than in the previous year. Attendance never dropped below 52 percent even in May when it becomes difficult to keep seniors in attendance even in their home school. It would appear that staff efforts to improve attendance during the 1981-82 resulted in decided improvement.

Pre/Post Testing - Academic Skills. For the 1981-82 school year, test results on a pre-post basis were obtained for both junior high and senior high students. The senior high school students were tested, as they were in previous years, in English, four areas of science and six areas of mathematics. This is the first time test results have been available for the junior high students and tests were administered in two areas of language arts, two areas of science and six areas of mathematics. Sufficient numbers of students were not available for testing in all subject areas, however, to make the results meaningful. Students in grades 8 and 9 were taught and tested as a group and students in grades 10, 11 and 12 were taught and tested as a group.

Junior high. Results for junior high school students are reported in two areas of language arts, reading and English skills. No results are reported in the areas of science as two few were tested to show a change. In mathematics, results are reported for math fundamentals, Algebra 1 and calculus.

Results for language arts are displayed in Table XIII. A .45 or six percent gain was made in grade placement for reading. As a normal gain in reading grade placement for seven months would be .70, this gain cannct be considered exemplary. In English skills, the junior high school students registered a gain of 2.53 raw score points or ten percent.

So few students were tested in science that no change in scores could be ascertained.

In mathematics three areas had sufficient numbers of students tested to measure change. Results in the math fundamentals, Algebra I and in calculus are displayed in Table XIV. In math fundamentals, the junior high school students showed an average raw score gain of 14.81 points. This is a 56 percent average gain. In Algebra I where only the brighter students would participate an average raw score gain of 12.63 was registered. This is a phenomenal 208 percent gain. Similarly, the few students who took calculus registered an average raw score gain of 21.06 or 262 percent.

Senior High. The test results of senior high school students in English are displayed in Table XV. In testing for grade placement in reading, results showed a net loss of .86 or 9 percent. Such lack of positive change after eight months of instruction may be an artifact of the small number of students tested on the post test not being representative of the total group present for pre testing. In English skills, more positive results were evidence. A gain of 9.79 or 35 percent was recorded. Impressive gains were shown in all three areas of science. Test results in science are displayed in Table XVI. In biology students showed an average mean gain of 9.45 raw score points or 70 percent. In chemistry a gain of 12.40 raw score points or 78 percent was realized and in physics a gain of 10.48 or 88 percent. Test results for the four subjects in mathematics are shown in Table XVII. Impressive gains were made in all subjects. In the fundamentals of algebra, a mean raw score gain of 8.85 or 144 percent was recorded. In Algebra II a gain of 11.09 or 115 percent was realized, in algebra/trigonometry 5.33 or 63 percent and in geometry an impressive 16.48 or 283 percent.

It is difficult to know how significant these gains in science and mathematics are but if one keeps in mind that the exposure to tutoring is only for a portion of a Saturday morning for eight months it seems safe to say that Med-Cor has been a valuable experience in bringing about positive changes in the knowledge and skills of students. Instruction in English skills, including reading proficiency, remains the weakest area of help given by Med-Cor. This seems to be evidenced not only by the test results but by the opinions of students that remain least supportive of the help given. The fact that 197 students were tested in English in October and only 80 in May is also probably reflective of a less than positive attitude on the part of students about this area of tutoring help.

TABLE XII

STUDENT ATTENDANCE

at

SATURDAY PROGRAM

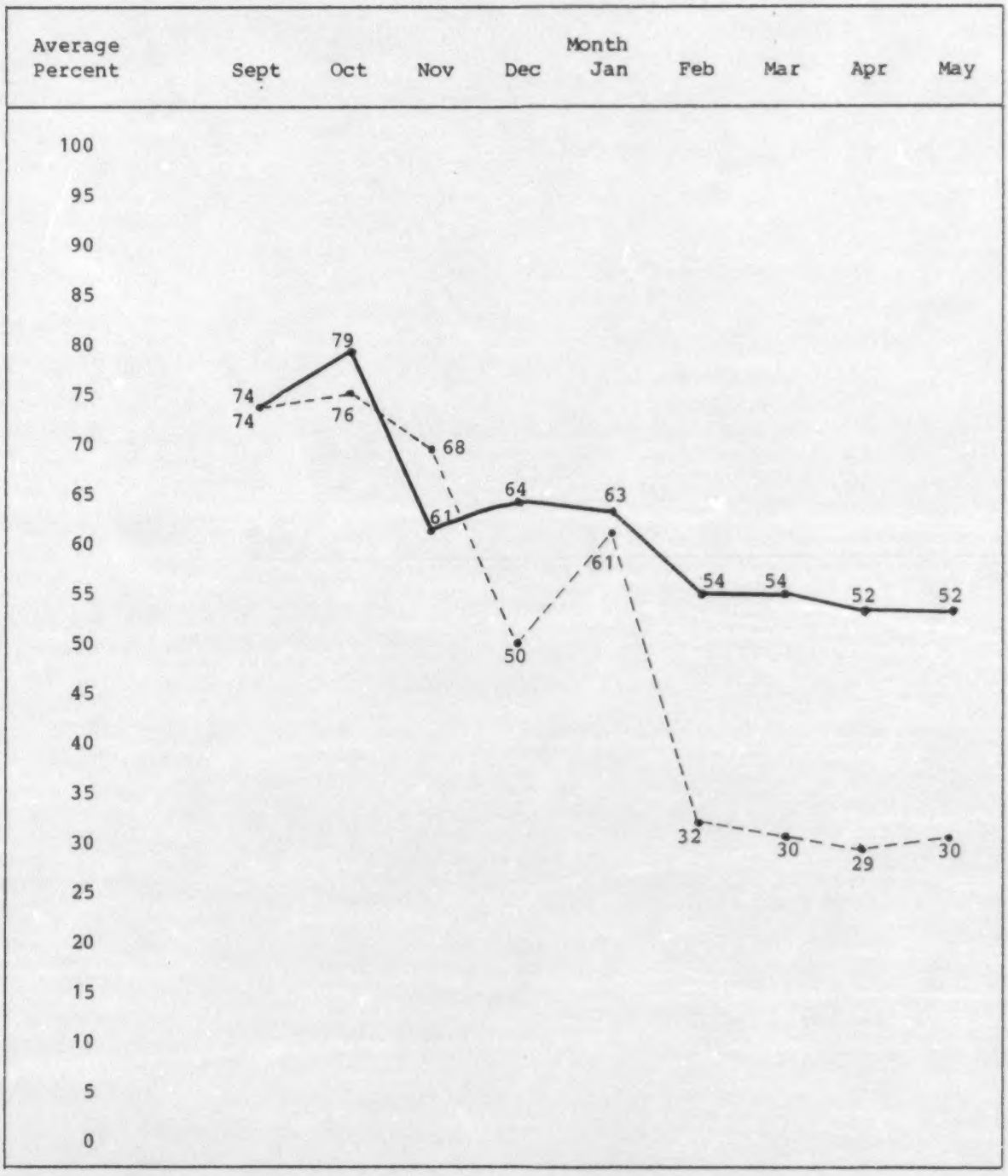

TABLE XIII

TEST RESULTS - ENGLISH

JUNIOR HIGH

Subject	No. Tested Pre/Post	Pre-Test Mean	Post-Test Mean	Diff.	Percent Mean Gain
Grade Placement for Reading	112/56	7.89	8.34	.45	6%
English Skills	121/98	25.11	27.64	2.53	10%

TABLE XIV

TEST RESULTS - MATHEMATICS

JUNIOR HIGH

Subject	No. Tested Pre/Post	Pre-Test Mean	Post-Test Mean	Diff.	Percent Mean Gain
Fundamentals	98/97	26.64	41.45	14.81	56%
Algebra I	44/45	6.07	18.7	12.63	208%
Calculus	16/16	8.03	29.09	21.06	262%

TABLE XV

TEST RESULTS - ENGLISH

SENIOR HIGH

Subject	No. Tested Pre/Post	Pre-Test Mean	Post-Test Mean	Diff.	Percent Mean Gain
Grade Placement for Reading	197/80	9.21	8.35	-.86	-9%
English Skills	180/147	28.05	37.84	+9.79	+35%

TABLE XVI

TEST RESULTS - SCIENCE

SENIOR HIGH

Subject	No. Tested Pre/Post	Pre-Test Mean	Post-Test Mean	Diff.	Percent Mean Gain
Biology	133/127	13.56	23.01	+9.45	+70%
Chemistry	43/42	15.84	28.24	+12.40	+78%
Physics	25/24	11.9	22.38	+10.48	+88%

TABLE XVII

TEST RESULTS - MATHEMATICS

SENIOR HIGH

Subject	No. Tested Pre/Post	Pre-Test Mean	Post-Test Mean	Diff.	Percent Mean Gain
Fundamentals of Algebra	62/61	6.13	14.98	+8.85	+144%
Algebra 2	40/40	9.65	20.74	+11.09	+115%
Algebra/Trig.	18/18	8.49	13.82	+5.33	+63%
Geometry	60/60	5.83	22.31	+16.48	+283%

Success of Program - Student Opinion. In the spring of 1982 students of grades 8 and 9 as a group and grades 10 and 11 as a group were questioned through a structured interview concerning the strengths and weaknesses of the program. Approximately twelve percent of each group was interviewed. Participants were selected by taking four or five students from each class in session. Responses from junior high school students were analyzed separately from those of senior high school students.

Junior High. All of the junior high school students interviewed thought the Med-Cor tutoring they had received this year was helpful. Three students commented that they would like more speaking and writing experience in the English class, but they thought the grammar review was helpful. Typical of student comments were the following:

"These classes supplement what we got in the home school."

"Biology was good but we could use more practical experience."

"Science was good but I would like to see more use of models and film strips."

All students interviewed thought the instruction received was interesting. They were complimentary to the instructors, commenting that the instructors "had good sense," and "didn't exhibit any meaness." One student commented that he couldn't understand very well the language of a teacher who had a Japanese accent.

No student indicated he or she had received any counseling help.

When asked to rate their total experience in Med-Cor to this point in time, 58 percent of the junior high school students rated it "excellent," 37 percent rated it "good" and 5 percent "average."

A number of suggestions were given by junior high school students for improving the program. There was not much unanimity of opinion about what is needed, however. Suggestions are listed below and whenever more than ten percent of the students made a suggestion, the percentage of students making the suggestion is indicated.

"We need more visiting specialists." (16 percent)
"We need summer work in doctors' offices." (11 percent)
"We need more lab experience." (11 percent)
"Nutrition is too short." (11 percent)
"We need more quizzes."
"We need more time in English."
"Math could be better."
"We need more instruction and less homework."
"We need film strips and visitors."
"We need a longer lunch period."
"We start too early."
"Food prices should be publicized."

Senior High. Most senior high school students thought the Med-Cor tutoring they had received was helpful. Instruction in science received the most positive comments. This appeared to be at least partially related to the fact that laboratory experience was made available to the classes in chemistry and that such experience was not available in the home school. Typical of the comments received about the tutoring received were the following:

"The tutoring I received will be helpful in the future."
"The biology helps we with my home school class."
"Chemistry was especially helpful with a good lab experience."

Although most students thought the tutoring received in mathematics and English was interesting, about 15 percent of those interviewed had negative comments about these two areas of tutoring help. There seems to be a wide range of help needed in mathematics and, as a consequence, for some students the class work is too easy and for some too hard. In English, the emphasis on grammar makes the work uninteresting and even boring for some. Typical of interviewee comments follow:

"English was all grammar and boring."
"We need more speaking and writing in English."
"I really didn't need the help in Math."

No negative comments about tutoring in science were received. Students gave high marks to the instructors for being "helpful" and "patient." About 10 percent of the students thought the instruction was "not very" interesting and another 10 percent thought the instruction was "somewhat" interesting.

Only about 21 percent of the students received some kind of counseling, but those who did were pleased with the help received. Counseling had included advice on classes to take, information to help in making career decisions, and help in solving learning problems. Typical of student comments about counseling help received were:

"He explained things and all is working out fine."
"There was individual follow-up which was very helpful."
"I haven't decided on a career, but they gave me good information."

Up to this point in time when interviewed, 32 percent of the senior high students rated their total experience in Med-Cor as "excellent," 58 percent as "good" and 10 percent as "average."

Most interviewees thought the Med-Cor program as very satisfactory as is and had no suggestions for improvement. Nevertheless, a number of suggestions for improvement did evolve from the interviews. They are listed below in order of the number of mentions by interviewees, the most listed first and the least listed last.

"We need more medical students and college students to talk to us."
"Application of instruction in the medical field needs to be stressed more in our studies."
"We need more field experience."
"We need even more lab. experience in science."
"We need counseling in choosing classes in college and the help needs to be individualized."

All seniors were surveyed at the end of the year. When asked whether or not, as a result of their Med-Cor experience, they felt more confident that they will be successful in pursuing a college education or career, eighty-two replied yes.

Counseling Services

An outcome of the 1980-81 evaluation was the illumination of a need of counselors to be better informed about all aspects of the program and a need for better referral services. Staff, in an effort to bring about improvement in these areas, scheduled meetings between staff, Med-Cor counselors and area counselors. In May, all Med-Cor counselors were surveyed concerning any improvements that may have occured. Five out of the six counselors thought that the referral practices were better this year when compared to last year. The one negative response listed one of the main problems in giving good service to students was still an inadequate referral system.

Counselors indicated that coordination between area and Med-Cor counselors has improved this year and that communication between Med-Cor staff and counselors was improved.

Help with academic problems still heads the list of counseling services provided but some help with personal problems and career problems continues to be given.

In the opinion of counselors, the following main problems exist in providing adequate counseling:

1. The heavy workload necessary because of a shortage of counseling time.
2. Systematic follow-up on counseling problems because of manpower shortage.
3. Lack of proper networking inclusive of school counselors, teachers and parents.
4. Difficulty of providing adequate counseling in academic problems when dependent on 20-week grade report.
5. Getting students to take initiative to seek help.
6. Building student confidence to face their problems and attempt a solution.

Family Core Unit

A finding of the 1980-81 evaluation was that, although parents were very supportive of the Med-Cor program, their attendance at meetings was very poor. It was recommended to staff that ways of informing parents about their son/daughter's extent of participation in the program be explored. As a result, staff increased their efforts to communicate with Spanish speaking parents in their own language. In addition, the content of meetings was planned in more detail and parents were involved in the planning. More social activities were also scheduled into the meetings so parents would have an opportunity to get to know each other as well as staff. Nine meetings were scheduled for parents during 1981-82 which was more than any previous year and all were reasonably well attended. Details of the schedule of meetings and number of parents in attendance may be found in Table XVIII. The average number of parents in attendance was slightly more than 59 or about 17 percent of the number of students enrolled.

A survey form was circulated to all parents which posed four basic questions about what the parents thought of Med-Cor and provided space for them to list any suggestions to improve Med-Cor. The forms were printed in Spanish and English so that parents could respond in either language. The four questions were in the form of statements with which parents could agree or disagree. The statements were as follows:

1. I am pleased with the help by son/daughter received from Med-Cor.
2. We were better informed this year than in previous years about our son/daughter's attendance and/or absence from the program.
3. As a result of parent meetings and other forms of communication, I understand what Med-Cor is trying to accomplish.
4. I think my son/daughter will re-enroll in Med-Cor next year.

Forty-two responses to this form were received from parents and not one disagreed with any of the statements. Parents remain very supportive of the program and feel better informed about the program and what it is trying to accomplish.

TABLE XVIII

PARENT MEETINGS

Date	No. in Attendance	Purpose
November 14	68	To plan Christmas Party
November 21	93	Monthly meeting
December 12	45	Monthly meeting
December 22	66	Christmas Party
January 23	43	Monthly meeting
February 20	47	Monthly meeting
February 27	30	Orientation for New Parents
March 20	100	Monthly meeting
April 24	41	Last monthly meeting

Following are typical suggestions to improve the program made by parents. They are listed without any indication of support, although some were mentioned by more than one parent.

1. Send a newsletter to parents
2. Have a workshop to get parents more involved.
3. Increase parent involvement with special projects.
4. Students should be able to get more after school help if needed.
5. I wish that Med-Cor, my child and the school would work together more closely.

Plans of 1982 Graduates

All seniors were sent a questionnaire regarding their plans for the fall of 1982. Twenty-three percent returned the questionnaire. Ninety-two percent said they expect to attend a four-year college and eight percent intend to attend a vocational technical school. As with previous classes, graduates' intended colleges include the whole range of southern California as well as some out-of-state colleges. Most graduates (83 percent) already have decided on careers and most (75 percent) intend to prepare for careers in health related professions.

- SUMMARY OF FINDINGS
- CONCLUSIONS
- RECOMMENDATIONS

SUMMARY OF FINDINGS

Status of 1981 Graduates

1. Ninety-four percent of the June 1981 graduates are enrolled in college.
2. Sixty-three percent are enrolled in four year colleges and thirty-one percent in two year colleges.
3. A 1981 Med-Cor graduate's chances of enrolling in college were much better than that of all graduates of participating schools (94% compared to 58.6%).
4. A higher percentage of Med-Cor graduates enrolled in four year colleges than was the case with all graduates (63% compared to 38.5%).
5. Over seventy percent of the 1981 Med-Cor graduates are pursuing a health related career.

Summer Program 1981

Introduction To Basic Medicine

1. Students who participated in the Introduction to Basic Medicine during the summer 1981 are very supportive of the program, claiming that the experience is real and gave them an authentic feeling of what hospital life is like.
2. The experience helped most of the students make their life career decision.
3. Students increased their self-confidence with the experience.
4. Students felt their contribution was needed and useful.
5. Students did not feel that the lack of employment opportunity was a handicap.
6. Hospital staff members were very receptive to students and appreciate the help they can give.
7. Staff members feel that expectations of students are raised as a result of the experience and counseling.

Introduction To Basic Science

1. Students who participated in the Introduction to Basic Science during the summer of 1981 thought the experience interesting and valuable because of the opportunity to learn the doctor patient relationship, to observe first-

hand the doctors work and to communicate with patients.

2. Students found the doctors and nurses most willing to work with them and felt that the patients accepted them.
3. Nurses think the I.B.M. program an excellent one and that students benefit from the experience. In their opinion, students get first-hand experience about health careers and grow in self-confidence.

Introduction To Laboratory Research

1. Hospital staff members are very supportive of Med-Cor students participating in the I.L.R. program.
2. The students fit right into the laboratory teams and perform a professional service.
3. Students develop good confidence and skills after two or three weeks.
4. Student placements in I.L.R. are carefully evaluated to insure optimum pairing of student needs and placement spots that can meet those needs.
5. There is some feeling on the part of hospital staff that students should be counseled to take their time in college and get the best grades possible.

S.A.T. Improvement Program

1. The average scaled S.A.T. score improvement in English for the 27 students tutored was 63.89.
2. The average scaled score improvement in mathematics was 90.19.
3. Twenty-two of the 27 students improved their English score.
4. Nineteen of the 27 students improved their mathematics score.

Tutorial Program

Holding Power

1. The primary reason for students leaving the Med-Cor program continues to be competing interests and responsibilities on Saturday.
2. Most of the students who dropped out still plan to attend college and many still plan to pursue a health career.

Attendance

1. Staff efforts to improve attendance during the 1981-82 year were successful.
2. Attendance was greater during 1981-82 then in the two previous years and also more stable.

Test Results

1. Junior high school students exhibited very little gain in English, registering a 6 percent mean gain in Grade Placement for Reading and a 10 percent mean gain in English skills.
2. Considerable change occurred in the mathematics skills of junior high school students, 56 percent mean gain in fundamentals, 208 percent mean gain in Algebra I and a 262 percent mean gain in calculus.
3. Senior high school students after seven months instruction registered a 9 percent mean loss in Grade Placement for Reading and a 35 percent mean gain in English skills.
4. Senior high school students exhibited mean gain percentages in science of 70 percent in biology, 78 percent in chemistry, and 88 percent in physics.
5. In mathematics senior high school students exhibited the greatest change recording mean gain percentages of 144 percent in fundamentals of algebra, 115 percent in Algebra II, 63 percent in algebra/trigonometry and 283 percent in geometry.

Student Opinion

1. Junior high school students, when interviewed, stated that the tutoring help received this year was helpful and interesting.
2. Junior high school students were complimentary to the instructors for their patience and understanding.
3. About 16 percent of junior high school students interviewed commented they would like more speaking and writing experience in the English class.
4. Most senior high school students interviewed thought the instruction received was both helpful and interesting.
5. Science instruction received the most positive comments from senior high school students.
6. Instruction in English and mathematics received negative comments from about 15 percent of the senior high school students.
7. About 21 percent of the senior high school students interviewed received some kind of counseling help. All were pleased with the help received.
8. When asked to rate their total experience in Med-Cor to this point in time, 58 percent of the junior high school interviewees rated the experience "excellent", 37 percent "good", and 5 percent "average".
9. When ask to rate their total experience in Med-Cor to this point in time, 32 percent of the senior high school interviewees rated the experience "excellent" 58 percent as "good" and 10 percent as "average."
10. Senior high school students, when asked for suggestions to improve Med-Cor, suggested "more medical and college students to talk to them", "more field experience", "even more laboratory experience in science".
11. Graduating seniors as a group said that as a result of their Med-Cor experience they felt more confident that they will be successful in pursuing a college education or career.

Counseling Services

1. Counselors felt that referral practices were better this year when compared with last year.
2. Counselors felt that communication between Med-Cor staff and counselors improved this year and that coordination between area and Med-Cor counselors was better.
3. Most counseling given was in the area of academic problems.

4. In the opinion of counselors, the greatest hindrance to better service was the heavy workload caused by a shortage of counseling staff and time.

Family Core Unit

1. Staff increased its effort to involve parents to in Med-Cor.
2. Attendance of parents at meetings was greater in number and in consistency when compared with previous years.
3. Parents remain supportive of Med-Cor and appreciative of what Med-Cor is doing for their sons and daughters.

Plans of 1982 Graduates

1. Ninety-two percent of the June 1982 graduates plan to attend a four-year college and eight percent expect to attend a vocational-technical school.
2. Seventy-five percent of the 1982 graduates who have decided on careers expect to go into health related fields.

CONCLUSIONS

Based on the findings of this evaluation the following conclusions are drawn:

1. The Med-Cor program is meeting its major goal of helping students become qualified and accepted by colleges and universities.
2. The Med-Cor program is successful in helping participating students become interested and motivated to enroll in advanced study and to prepare for health careers.
3. The Saturday program during the school year is doing much to assist students in improving their skills in mathematics and science.
4. The tutorial program to help students improve their skills in English does not seem to be accomplishing its objective.
5. The summer program is particularly successful in raising the career aspirations of students, motivating their interest in pursuing a health related career and in improving their self-image and confidence.
6. The high degree of success of participants in qualifying for and pursuing advanced educational experience is evident that the program is doing much to reduce and ultimately remove the consequences of racial isolation.
7. Parents are very supportive of the Med-Cor program, want to be informed, and are ready to assist in ways to keep the program operating successfully.

RECOMMENDATIONS

1. As instruction in English appears to remain a major weakness in the Saturday program, staff should re-study the objectives of the course and see that content matches objectives. A portion of the students seem to expect something different then the course is now designed to provide.
2. The currently used "Grade Placement for Reading" test should be analyzed to see if it is testing what is being taught. If the two do not match,either the content of the course should be revised or an alternate test selected.
3. The summer program remains a very essential element of Med-Cor for motivation of students and as an exploratory experience to assist students in making successful career choices. The experience should be available to a larger portion of the Med-Cor students. The primary restriction to greater participation remains the limited paid work experience opportunities.

   The Med-Cor staff knows this and has continuously pursued sources of funds to expand the opportunities for student participation but has been less successful then desired. In the hope that sponsoring or other agencies that read this evaluation wish to and can be helpful, it is again recommended that ways be explored to expand participation of students in the summer program.

APPENDIX

LOS ANGELES UNIFIED SCHOOL DISTRICT
RESEARCH AND EVALUATION BRANCH

QUESTIONNAIRE: 1982 GRADUATES OF MED-COR

TO HIGH SCHOOL SENIORS: Thank you for participating in this survey of the 1982 graduates of Med-Cor. The answers you and other students provide will help in the continuing effort to improve the Med-Cor Program and better meet its purposes.

1. Sex Male ☐ Female ☐

2. Have you chosen a career? Yes ☐ No ☐

Doing what? _____ ☐☐

3. What do you expect to be doing in October 1982? (mark one only)

a. Full time student in 4 year college . . . . . ☐
b. Full time student in 2 year college . . . . . ☐
c. Full time student in vocational/technical school or skill center . . . . ☐
d. Student part-time only . . . . . ☐
e. Student part-time--working part-time . . . . . ☐
f. Homemaker--student part-time . . . . . ☐
g. Working part or full time only . . . . . ☐
h. Working under an apprenticeship program . . . . . ☐
i. Full time military service . . . . . ☐
j. Full time homemaker only . . . . . ☐
k. Other (travel, take a break, attend school later, no plans . . . . . ☐

4. If you are reasonably certain which school or college you will be attending in October 1982, give its name: _____

5. If you will be attending a 2 year college or vocational/technical school in October 1982, what type of course will you be taking? (mark one only)

a. Vocational or technical emphasis . . . . . ☐
b. Two-year academic emphasis and then a career . . . . . ☐
c. Two-year academic and then transfer to university or 4 year college . . . ☐
d. Uncertain . . . . . ☐

6. As a result of your Med-Cor experience do you feel more confident that you will be successful in pursuing a college education or career?

Yes ☐
No ☐

LOS ANGELES UNIFIED SCHOOL DISTRICT
Research and Evaluation Branch

EVALUATION OF USC SCHOOL OF MEDICINE MED-COR PROGRAM

Student Interview Form

1. Sex: Male_____ Female_____

2. Grade level: Junior High____ Senior High____

3. Do you think the Med-Cor tutoring you received this year was helpful?

   Science?

   English?

   Mathematics?

4. Was the tutoring reasonably interesting?

   Science?

   English?

   Mathematics?

5. Did you receive any counseling? Yes_____ No_____
   If so, what kind?

   Personal _____

   Academic _____

   Career _____

   Was it helpful?

6. How would you rate your total experience in Med-Cor to this point in time?

7. What suggestions would you give for improving the Saturday program?

LOS ANGELES UNIFIED SCHOOL DISTRICT
Research and Evaluation Branch

EVALUATION OF USC SCHOOL OF MEDICINE MED-COR PROGRAM

Dear Parent:

Thank you for participating in this evaluation of the 1981-82 Med-Cor program. Your cooperation will help us to improve Med-Cor and do a better job of helping the participants be more successful in school and in a future career.

Please print or check the following information:

1. Name of school your son/daughter attends _____

2. Sex of your son/daughter. Male ☐ Female ☐

Check (✓) the response which most closely approximates your agreement or disagreement with each of the following statements. PLEASE BE FRANK. No parent or student will be identified with the responses to the statements. Again, thank you for your cooperation.	Strongly Agree	Agree	Disagree	Strongly Disagree
3. I am pleased with the help by son/daughter received from Med-Cor.				
4. We were better informed this year than in previous years about our son/daughter's attendance and/or absence from the program.				
5. As a result of parent meetings and other forms of communication, I understand what Med-Cor is trying to accomplish				
6. I think my son/daughter will re-enroll in Med-Cor next year.				

7. Please write any suggestions you would make to improve Med-Cor. Use the back of the form if necessary.

Thank you for completing this form. Please return it to your Med-Cor representative.

LOS ANGELES UNIFIED SCHOOL DISTRICT
Research and Evaluation Branch

EVALUATION OF USC SCHOOL OF MEDICINE MED-COR PROGRAM

Dear Med-Cor Counselor:

Thank you for participating in this evaluation of the 1981-82 Med-Cor program. Please check or respond briefly to the following questions. Your answers will help us to know if Med-Cor is accomplishing the purposes for which it was designed.

1. The area of counseling need most often indicated by Med-Cor participants during 1981-82 was:

   personal problems _____
   career probelms _____
   academic problems _____

2. Student referral practices in Med-Cor improved this year when compared to last year.

   Yes _____
   No _____

3. Efforts made during 1981-82 to improve lesson and coordination between area and Med-Cor counseling staff were effective.

   Yes _____
   No _____
   Comment:

4. Efforts made during 1981-82 to improve communication between Med-Cor staff and counselors were effective.

   Yes _____
   No _____
   Comment:

5. The main problems in providing adequate counseling were: